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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/681,430	04/03/2001	Tadashi Takano	SIMTEK6140	4775

25776 7590 01/28/2003

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EXAMINER

PHAM, LEDA T

ART UNIT PAPER NUMBER

2834

DATE MAILED: 01/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/681,430

Applicant(s)

TAKANO, TADASHI

Examiner

Leda T. Pham

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This office action is in response to Amendment filed on 11/04/02.
2. Claims 1 – 35 are presented for examination.

Claim Objections

3. Claims 1, 17, 21, 23 – 24 are objected to because of the following informalities: in claim 1, “said first end closures” should be change to –said first end closure--, “an cylindrical” in claim 17 should be change to –a cylindrical--, “the bearing” in claims 21, 23 and 24 lack of antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 102

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

1. Claims 1 – 5, 8, 10, 13 – 15, 17 – 19, 21 – 22, 24 – 25, 27 – 29, 31 – 32, and 33 – 35 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakanosono (U.S. Patent No. 6,276,475 B1).

Nakanosono teaches in figure 1 a DC rotating electrical machine (11) comprised of an outer housing (27) forming a stator (42) of said DC rotating electrical machine, said outer

housing being comprised of a generally cylindrical center section and affixed first and second end closures (29, 31), a rotor (43) journaled within said outer housing and extending through said first end closures (29) for driving connection to a related rotating machine (68), said first end closure forming a cavity in which a substantial portion of said related rotating machine is contained (the integral 76 and 29).

Referring to claim 2, Nakanosono teaches a third end closure (79) is affixed in closing relation to the cavity of the first end closure (76) for containing the related rotating machine (68) within the cavity of said first end closure (76).

Referring to claim 3, Nakanosono teaches the first and second end closures (29, 31) are axially spaced from each other and the second end closure is integrally formed with an axially extending cylindrical center section (figure 1, 6).

Referring to claim 4, Nakanosono teaches the first end closure (29) is in abutting relation to the axially extending cylindrical center section (figure 1, 6).

Referring to claim 5, Nakanosono teaches the first end closure (29) is axially spaced from the axially extending cylindrical center section (figure 1, 6).

Referring to claim 8, Nakanosono teaches a portion of the laminated core (42) is exposed between the first and second end closures (29, 31).

Referring to claim 10, Nakanosono teaches a sensor (46) contained within the outer housing for sensing the rotational position of said rotor (43).

Referring to claim 13, Nakanosono teaches the controller (46) is mounted in the interior of the motor (41).

Referring to claim 14, Nakanosono teaches the controller (46) is mounted axially between the first and second end closures (29, 31).

Referring to claim 15, Nakanosono teaches the controller (46) is mounted in a cylindrical member interposed between the first and second end closures (29, 31).

Referring to claim 17, Nakanosono teaches the second end closure (31) carries a cylindrical post (33) extending into a cylindrical opening in the rotor (43) for journaling said rotor within the outer housing (27).

Referring to claim 18, Nakanosono teaches the cylindrical post (33) extends a substantial distance axially into the rotor (43).

Referring to claim 19, Nakanosono teaches the cylindrical post (33) engages a bearing (44) associated with the rotor (43).

Referring to claim 21, Nakanosono teaches the bearing (44, 45) associated with the rotor comprises an anti friction bearing (column 4, line 7-8).

Referring to claim 22, Nakanosono teaches the cylindrical post (33) is detachably connected to the second end closure (31).

Referring to claim 24, Nakanosono teaches the bearing (44, 45) associated with the rotor (43) comprises an anti friction bearing (column 4, line 7-8).

Referring to claim 25, Nakanosono teaches the cylindrical post (33) is integrally formed with the second end closure (31).

Referring to claim 27, Nakanosono teaches a DC rotating electrical machine (figure 1) comprised of an outer housing (27) forming a stator (42) of said DC rotating electrical machine, said outer housing (27) being comprised of a generally cylindrical center section closed at

opposite ends by first and second end closures (29, 31), a rotor (43) within said outer housing and extending through said first end closures (29) for driving connection to a related rotating machine (68), said second end closure (31) carrying a cylindrical post (33) extending into an cylindrical opening in said rotor (43) for journalling said rotor within said outer housing.

Referring to claim 28, Nakanosono teaches the cylindrical post (33) extends a substantial distance axially into the rotor (43).

Referring to claim 29, Nakanosono teaches the cylindrical post (33) engages a bearing (44) associated with the rotor (43).

Referring to claim 31, Nakanosono teaches the bearing (44, 45) associated with the rotor comprises an anti friction bearing (column 4, line 7-8).

Referring to claim 32, Nakanosono teaches the cylindrical post (33) is detachably connected to the second end closure (31).

Referring to claim 34, Nakanosono teaches the bearing (44, 45) associated with the rotor comprises an anti friction bearing (column 4, line 7-8).

Referring to claim 35, Nakanosono teaches the cylindrical post (33) is integrally formed with the second end closure (31).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 6 - 7, 9, and 11 - 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanosono in view of Takagi et al (U. S. Patent No. 6,081,056).

Nakanosono teaches a DC rotating electrical machine having the limitations of the base claimed invention, except for the added limitations of the following:

The stator made up a plurality of field coils.

The plurality of field coils is wound around a laminated core.

The DC rotating electrical machine is brushless.

A controller responsive to the output of the sensor switches the polarity of the field coils.

Takagi teaches in figure 1 - 6, a stator (10) made up a plurality of field coils (12), wherein the plurality of field coils are wound around a laminated core (11), and a controller (20) responsive to the output of the sensor (24) switches the polarity of the field coils for controlling to drive the motor. Also, Takagi disclose the machine is brushless.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Nakanosono's DC rotating electric machine with the stator, the controller as taught by Takagi for controlling to drive the motor.

4. Claims 20, 23, 30, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanosono in view of Jensen et al. (U.S. Patent No. 6,140,725)

Nakanosono teaches a DC rotating electrical machine having the limitations of the base claimed invention, except for the added limitations of the bearing associated with the rotor comprising an oil impregnated, sleeve type bearing.

Jensen teaches a brushless motor having the bearing associated with the rotor comprising oil impregnated, sleeve type bearing (9, 16) for carrying the bearing.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Nakanosono's DC rotating electric machine with the bearing having sleeve type bearing as taught by Jensen for carrying the bearing.

5. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanosono in view of Bloch et al. (U.S. Patent No. 6,169,345 B1)

Nakanosono teaches a DC rotating electrical machine having the limitations of the base claimed invention, except for the added limitations the DC rotating electrical machine comprises a motor and the associated machine is a hydraulic pump. Bloch teaches a motor having a hydraulic pump (gear, column 1, lines 40 – 43) for converting frequency.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Nakanosono's DC rotating electric machine with the hydraulic pump as taught by Bloch for converting frequency.

6. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanosono, and in view of its being common knowledge in the art that rearranging part of an invention involves only routine skill.

Nakanosono disclose the controller in of the machine substantially as recited in the claim 16. However, the controller is mounted on the interior of the machine while the claim is recite the controller is mounted on the exterior of the machine.

Nevertheless, it would have been obvious to one having ordinary skill in the art at the time the invention was made to rearrange the controller for easy to look. This is obvious because it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

Response to Arguments

7. Applicant's arguments filed 11/4/02 have been fully considered but they are not persuasive.
8. In view of applicant's argument the specification rejection and the claim rejections-35 USC 112 have been withdrawn. However, claims 1, 17, 21, 23, and 24 are still being objected to.
9. The arguments in the art rejection are not persuasive because Nakanosono discloses a related rotating machine (the reduction gear transmission 68), and the motor shaft (43) does extend through the first end closure (29).
1. In response to applicant's argument that Nakanosono fails to disclose "a related rotating machine" and "the motor shaft does not extend through these end closures". The Examiner disagrees with this statement, because the specification paragraph 0005 discloses, "the electrical machine comprises a generator and it is driven by another rotating machine such as internal combustion engine", it does not recite about "a relating rotating machine". Therefore, the examiner assumed as "the rotating motor" in the first action filed on 8/14/02. Now, in view of applicant's argument, it is noted that Nakanosono clearly discloses a reduction gear transmission (68) that can treat at a related rotating machine, and the shaft (43) extended through the first end closure (29).

Conclusion

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leda T. Pham whose telephone number is (703) 305-4864. The examiner can normally be reached on M-F (7:30-5:00) first Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-9176 for regular communications and (703) 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3431.

Leda T. Pham
Examiner
Art Unit 2834

LTP
January 15, 2003


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